

1. A spinal stabilization system, comprising:

a stabilization device positionable along a spinal column, said stabilization device including at least one auxiliary element associated therewith, said at least one auxiliary element including a cannulation extending at least partially therethrough; and

5 a holding element including a distal portion and a proximal portion, said distal portion positionable in said cannulation and cooperating with said auxiliary element to maintain a positioning of said stabilization device along the spinal column.

2. The system of claim 1, wherein said stabilization device comprises an

10 elongated plate including a number of bone anchor openings extending therethrough.

3. The system of claim 2, wherein said auxiliary element includes a retaining

device positionable relative to said elongated plate to at least partially overlap at least one of said bone anchor openings.

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4. The system of claim 3, wherein said retaining device includes a fastener and

said cannulation extends along a central axis of said fastener.

5. The system of claim 4, wherein said retaining device includes a retaining

20 member including a central aperture for receiving said fastener.

6. The system of claim 4, wherein said elongated plate includes an aperture

extending therethrough and said fastener is engageable with said aperture.

7. The system of claim 1, wherein:

said cannulation extends completely through said auxiliary element; and

said distal portion of said holding element extends through said auxiliary element and is engageable with a structure of the spinal column when said stabilization device is

5 positioned along the spinal column.

8. The system of claim 1, wherein said auxiliary element is movable relative to said stabilization device.

10 9. The system of claim 8, wherein said holding element engages said auxiliary element and is movable to manipulate said auxiliary device to a desired position relative to said stabilization device.

10. The system of claim 1, wherein said holding element includes an intermediate
15 portion between said distal and proximal portions, said intermediate portion including a distally oriented engagement surface for engaging said auxiliary element.

11. The system of claim 10, wherein said proximal portion of said holding element
includes a first driving tool engaging portion proximally adjacent said intermediate portion
20 and a second driving tool engaging portion spaced from said first driving tool engaging portion and adjacent a proximal end of said proximal portion.

12. The system of claim 11, wherein said second driving tool engaging portion includes a recess in an outer surface of shaft comprising said proximal portion.

13. The system of claim 1, wherein said distal portion of said holding element
5 includes a shaft and a penetrating element at a distal end of said shaft.

14. The system of claim 13, wherein said shaft is unthreaded.

15. The system of claim 1, further comprising a device positionable between
10 vertebrae of a spinal column and wherein said stabilization device is positionable along the vertebrae.

16. The system of claim 15, wherein:
said cannulation extends completely through said auxiliary element; and
15 said distal portion of said holding element extends through said auxiliary element and is engageable with said device when said stabilization device is positioned along the spinal column.

17. The system of claim 15, wherein said device is a corpectomy implant and said
20 stabilization device is an elongated plate.

18. The system of claim 1, further comprising an instrument engageable to said proximal portion of said holding element.

19. The system of claim 18, wherein said proximal portion of said holding element includes a first instrument engaging portion adapted to deliver a rotational force from said instrument to said holding element and a second instrument engaging portion to
5 simultaneously axially secure said instrument to said holding element.

20. A spinal stabilization system, comprising:
a stabilization device positionable along a spinal column and including an auxiliary element associated therewith and movable relative thereto, said auxiliary element including a
10 cannulation extending at least partially therethrough; and
a holding element including a distal portion positionable in said cannulation of said auxiliary element, a proximal portion extending proximally from said distal portion, and an intermediate portion therebetween, wherein said intermediate portion includes a distally oriented engagement surface adapted to engage said auxiliary element, said holding element
15 movable to position said auxiliary element in a desired position relative to said stabilization device.

21. The system of claim 20, wherein said stabilization device comprises an elongated plate including a number of bone anchor openings extending therethrough.

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22. The system of claim 21, wherein said auxiliary element includes a retaining device positionable relative to said elongated plate to at least partially overlap at least one of said bone anchor openings.

23. The system of claim 20, wherein said proximal portion of said holding element includes a first driving tool engaging portion proximally adjacent said intermediate portion and a second driving tool engaging portion spaced from said first driving tool engaging
5 portion and adjacent a proximal end of said proximal portion.

24. The system of claim 23, wherein said second driving tool engaging portion includes a recess in an outer surface of a shaft comprising said proximal portion.

10 25. The system of claim 20, wherein said cannulation extends completely through said auxiliary element and said distal portion of said holding element includes a shaft extendable through said cannulation and a penetrating element at a distal end of said shaft for engagement with the spinal column.

15 26. The system of claim 20, wherein said proximal portion of said holding element includes a first instrument engaging portion adapted to deliver a rotational force from an instrument to said holding element and a second instrument engaging portion adapted to axially secure the instrument to said holding element.

20 27. A device for temporarily securing a spinal stabilization system to a spinal column, comprising:

a holding element including a distal portion positionable in a cannulation of the stabilization system, a proximal portion extending proximally from said distal portion, and an

intermediate portion therebetween, wherein said proximal portion of said holding element includes a first instrument engaging portion adapted to deliver a rotational force to said holding element and a second instrument engaging portion spaced from said first instrument engaging portion adapted to deliver an axial force to said holding element.

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28. The device of claim 27, wherein said intermediate portion includes a distally oriented engagement surface adapted to engage an auxiliary element of the stabilization system and deliver a manipulation force thereto.

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29. The device of claim 27, wherein said distal portion of said holding element includes a shaft and a penetrating element at a distal end of said shaft.

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30. The device of claim 27, wherein said proximal portion includes a shaft and said first instrument engaging portion is positioned adjacent said intermediate portion at a distal end of said shaft and said second instrument engaging portion is positioned adjacent a proximal end of a shaft.

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31. The device of claim 30, wherein said first instrument engaging portion includes a head shaped to receive a tool thereover and said second instrument engaging portion includes a recess about said shaft.

32. A driving instrument for remotely positioning a holding element relative to a spinal stabilization system, comprising:

a handle portion;

a first member extending distally from said handle portion;

a second member extending distally from said handle portion through said first member, wherein said second member includes a holding element engaging portion at a distal
5 end thereof and a central passage extending along at least a portion of a length thereof and opening at said distal end; and

a coupling device between said first and second members spaced proximally from said distal end of said second member, said coupling device including a coupled position projecting into said central passage in a first relative position of said first and second members
10 and movable to a release position out of said central passage when said first and second members are in a second relative position to one another.

33. The instrument of claim 32, wherein said second member includes at least one hole in a distal portion thereof spaced proximally from said distal end thereof, and said
15 coupling device includes at least one ball member positionable in said hole and movable between said coupled position and said release position.

34. The instrument of claim 33, wherein said first member includes an internal passage for receiving said second member therein, said internal passage including an enlarged
20 distal portion and an intermediate portion extending proximally from said enlarged distal portion, wherein said in said first relative position of said first and second members an inner wall surface about said intermediate portion contacts said at least one ball member to maintain said at least one ball member in said coupled position in said hole and in said second relative

position said enlarged portion is positioned adjacent said at least one ball member allowing movement of said at least one ball member in said hole to said release position.

35. The instrument of claim 32, wherein said first member includes an internal
5 passage for receiving said second member therein, said internal passage including an enlarged distal portion and an intermediate portion extending proximally from said enlarged distal portion, wherein in said first relative position of said first and second members an inner wall surface about said intermediate portion contacts said coupling device to maintain said coupling device in said coupled position and in said second relative position said enlarged
10 portion is positioned adjacent said coupling device allowing movement of said coupling device to said release position.

36. The instrument of claim 32, wherein said second member includes a proximally facing shoulder and in said first relative position a distal end of said first member
15 abuts said shoulder.

37. The instrument of claim 32, wherein said first member is spring-biased relative to said second member to said first relative position.

20 38. The instrument of claim 32, wherein said first member is movable relative to said second member and said handle portion between said first and second relative positions.

39. The instrument of claim 38, wherein said handle portion includes a distally oriented opening adapted to movably receive a proximal end portion of said first member therein as said first member is moved between said first and second relative positions.

5 40. The instrument of claim 39, wherein said first member includes a ring extending thereabout adjacent said proximal end thereof to facilitate movement of said first member proximally relative to said second member and said handle against a distally oriented spring bias of said first member.

10 41. The instrument of claim 32, wherein said handle portion includes a cap rotatably coupled about a proximal end thereof.

 42. A spinal stabilization system, comprising:
an elongate plate including at least one opening for receiving a bone anchor;
15 a retaining device engageable to said plate and positionable over said at least one bone anchor to prevent said bone anchor from backing out of said at least one opening; and
a blocking member attachable to said retaining device, said blocking member including a body portion extending over said retaining device and at least a portion of said at least one bone anchor when said blocking member is attached with said retaining device.

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 43. The system of claim 42, wherein said retaining device includes a cannulation and said blocking member includes an engagement portion engageable with said retaining device in said cannulation.

44. The system of claim 43, further comprising a retention device positionable in said cannulation and engageable to structure underlying said plate, said engagement member engageable with said retention device.

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45. The system of claim 44, wherein said retention device includes a sleeve with a central passage to receive said engagement portion.

46. The system of claim 43, wherein said retaining device includes a fastener
10 engageable with said plate and a retaining member engageable to said plate with said fastener, said cannulation extending through said fastener.

47. The system of claim 42, wherein said body portion of said blocking member
15 extends along an upper surface of said plate and said anchor and said retaining device are completely covered by said body portion.

48. The system of claim 42, wherein said plate includes a pair of openings and a
bone anchor in each of said openings, said retaining device is positioned between said pair of
openings, and said body portion extends from said retaining device and covers said retaining
20 device and each of said anchors positioned in said openings when engaged to said retaining device.

49. A method for positioning a stabilization system along a spinal column,
comprising:

accessing the spinal column;

placing a stabilization device along the spinal column; and

5 placing a holding element through an auxiliary element of the stabilization device into
engagement with the spinal column.

50. The method of claim 49, further comprising securing the stabilization device to
the spinal column with bone anchors while maintaining a position of the stabilization device
10 with the holding element.

52. The method of claim 50, further comprising manipulating the auxiliary element
relative to the stabilization device with the holding element.

15 53. The method of claim 51, further comprising securing a driving instrument to
the holding element before manipulating the auxiliary element.

53. The method of claim 52, wherein securing the driving instrument includes
axially securing and rotationally securing the holding element to the driving instrument.

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54. The method of claim 53, further comprising axially withdrawing the holding
element from the auxiliary element after manipulating the auxiliary element.

55. The method of claim 49, further comprising placing a second holding element through a second auxiliary element of the stabilization device and into engagement with the spinal column.

5 56. The method of claim 49, further comprising placing an implant between vertebrae of the spinal column.

57. The method of claim 56, wherein placing the holding element includes placing the holding element into engagement with the implant.

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58. The method of claim 57, further comprising placing a second holding element through a second auxiliary element of the stabilization device and into engagement with the implant.

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59. The method of claim 49, further comprising:

removing the holding element; and

securing a blocking member to the auxiliary element, the blocking member including a body portion substantially covering the auxiliary element and at least one bone anchor anchoring the stabilization device to the spinal column.

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60. A method for positioning a stabilization system along a spinal column, comprising:

accessing the spinal column;

placing a stabilization device along the spinal column;

placing a holding element into a cannulation of an auxiliary element of the
stabilization device;

maintaining a position of the stabilization device along the spinal column with the

5 holding element; and

manipulating the auxiliary element with the holding element.

61. The method of claim 60, wherein placing the holding element includes placing
the holding element through the cannulation into engagement with the spinal column.

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62. The method of claim 60, wherein manipulating the auxiliary element includes
remotely manipulating the auxiliary element with a tool coupled to the holding element.

63. A method for positioning a stabilization system along a spinal column,

15 comprising:

accessing the spinal column;

placing a stabilization device along the spinal column;

placing a holding element into a cannulation of an auxiliary element of the
stabilization device; and

20 maintaining an orientation of the auxiliary element relative to the stabilization device
with the holding element.

64. The method of claim 63, further comprising maintaining a position of the stabilization device along the spinal column with the holding element.

65. The method of claim 63, further comprising manipulating the auxiliary element
5 relative to the stabilization device with the holding element.

66. The method of claim 63, wherein:
the stabilization device is an elongate plate including at least one anchor opening and
the auxiliary element is a retaining device having a first position permitting placement of an
10 anchor in the at least one anchor opening and a second position extending at least partially
over the at least one anchor opening; and
maintaining the orientation includes maintaining the retaining device in the first
position.

15 67. The method of claim 66, further comprising manipulating the retaining device
to the second position with the holding element.

68. A method for positioning a stabilization system along a spinal column,
comprising:
20 accessing the spinal column;
placing a first stabilization device along the spinal column;
placing a second stabilization device along the spinal column, the first and second
stabilization devices each including a portion having a cannulation extending therethrough;

aligning the cannulations of the first and second stabilization devices; and
placing a holding element into the cannulations of the first and second stabilization
devices to align the first and second stabilization devices with one another.

- 5 69. The method of claim 68, wherein placing the holding element includes
engaging the holding element to the spinal column to maintain a position of the first and
second stabilization devices on the spinal column.